

MULLITE

Property	ASTM Method	Designation	Mullite
Color			Grey – tan
Gas/Liquid Permeability	F134B	Atm-cc/sec	None

Density	C 20-97	g/cc	2.97
Hardness	-	Mohs Scale	8
Water Absorption	C 20-97	%	0
Flexural Strength	F417-87	PSI	17,000
Tensile Strength	-	PSI	15,000
Compressive Strength	-	PSI	150,000
Elastic Modulus	C848	PSI x 10 ⁶	25
Shear Modulus	C848	PSI x 10 ⁶	10

Linear Coefficient of Thermal Expansion	C372-96	(@ 25°C - 100°C) x10 ⁻⁶ /°C	4.7
	-	(@ 25°C - 300°C) x10 ⁻⁶ /°C	4.6
	-	(@ 25°C - 600°C) x10 ⁻⁶ /°C	5.2

Thermal Conductivity 25°C	C 408	W/m-K	5
Maximum Use Temperature (Non Loading)	-	°C	1700
	-	°F	3100

Dielectric Strength (1/8" Thick)	D149-97A	V/mil	260
Dielectric Constant @ 1MHz	D150-98	At 25°C	6.7
Dielectric Constant (@GHz)	D2520-95	At 25°C	6.9 (@8.9)
Dielectric Loss @ 1MHz	D150-98	At 25°C	0.002
Dielectric Loss (@GHz)	D2520-95	At 25°C	0.003 (@8.9)
Volume Resistivity (ohm-cm)	D257	At 25°C	>1.0E + 15
	-	At 300°C	4.8E + 13
	-	At 700°C	4.1E + 09

NOTE: THE INFORMATION IN THIS DATA SHEET IS FOR DESIGN GUIDANCE ONLY. STC DOES NOT WARRANTY THIS DATA AS ABSOLUTE VALUES. FORMING METHODS AND SPECIFIC GEOMETRY COULD AFFECT PROPERTIES. SLIGHT ADJUSTMENTS CAN BE MADE TO SOME OF THE PROPERTIES TO ACCOMMODATE SPECIFIC CUSTOMER REQUIREMENTS. MOST OF THE DENSE MATERIALS IN THE TABLE ARE RESISTANT TO MECHANICAL EROSION AND CHEMICAL ATTACK. STC HAS PERFORMED TESTING IN ACCORDANCE WITH ASTM D2442 FOR CERTAIN COMPOSITIONS. PLEASE CONTACT OUR TECHNICAL STAFF FOR APPROPRIATE MATERIAL AND SPECIFIC TEST RESULTS.